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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/923,993	08/08/2001	Shinichi Hakamada	35.C15659	1201
5514	7590	04/20/2004	EXAMINER	
FITZPATRICK CELLA HARPER & SCINTO			FAISON, VERONICA F	
30 ROCKEFELLER PLAZA			ART UNIT	
NEW YORK, NY 10112			PAPER NUMBER	
			1755	
DATE MAILED: 04/20/2004				

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/923,993	HAKAMADA ET AL.	
	Examiner	Art Unit	
	Veronica F. Faison	1755	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 February 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-36 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-36 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

Claim 22 has been amended, and claims 37-68 have been canceled. Hence, claims 1-36 are pending in the application. The provisional ODP has been withdrawn because the application (09/923,417) has issued with different claims than what were present in the Patent Application Publication.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 22 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 22, Applicant states that "the nonionic surfactant is contained in the ink an amount not to cause separation at an interface portion of the ink where the liquid medium contains no coloring material. The Examiner is still confused at how there is no separation of the ink and yet Applicant states that the liquid medium contains no coloring material. Please clarify.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1, 6-12, 32, 35 and 36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bauer et al (US Patent 6,176,908 B1).

Bauer et al teach an aqueous fluorescent red ink jet ink comprising an aqueous vehicle, a red or magenta pigment, a polymeric dispersant, a fluorescent dye (abstract and col. 1 line 66-col. 2 line 5). The aqueous vehicle is a mixture of water and at least one water soluble or water miscible organic solvent such as glycol or glycol ether, wherein the mixture is present in the amount of 70 to 99.8 percent by weight (col. 2 lines 48-67). The colorant present in the ink composition contains at least one red or magenta pigment and a fluorescent red dye (Acid Red 52). The ink may also contain a yellow pigment and/or yellow dye, which may be either fluorescent or non-fluorescent. The pigments may be present in the composition in the amount of 0.1 to 5 percent by weight. The fluorescent red dye is present in the amount of 0.05 to 2 percent by weight (col. 3 lines 1-23). The reference discloses that other ingredients or additives that are typical for ink jet ink such as surfactants, biocides and humectants may be added to the

ink composition (col. 3 line 66-col. 4 line 7). The reference remains silent as to which specific surfactant may be used and to whether or not the non-fluorescence coloring material is an azo dye. However, it is the position of the Examiner that any known surfactant and yellow dye, such as nonionic surfactants including Acetylenol EH and azo dyes having the properties claimed by Applicant, may be used because the reference broadly discloses surfactants and yellow dye. The reference also discloses that the ink composition may have a surface tension from about 15 to about 70 dyne/cm (col. 4 lines 20-23). Bauer et al fail to specifically exemplify a glycerin (first organic compound), urea and its derivatives and a specific surfactant (second organic compound). Therefore, it would have been obvious to one of ordinary skill in the art to use the glycerin (first organic compound), urea and its derivatives and a specific surfactant (second organic compound) as claimed by applicant as Bauer also discloses the use glycerin (first organic compound), urea and its derivatives and a specific surfactant (second organic compound) (i.e. typical additives or ingredients for ink jet ink) but shows no example incorporating them.

Claims 10-16, 18-21, 23-26, 28-30 and 33-34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bauer et al (US Patent 6,176,908 B1) as applied to claims 9-12, 32, 35 and 36 above, and further in view of Teraoka et al (US Patent 5,865,883).

Bauer et al is described above but fails to teach a glycerin, urea and its derivatives and a specific surfactant.

Teraoka et al teach a fluorescent ink for ink jet recording comprising a dye having a pyrene ring and triethanolamine (col. 3 lines 49-51). The dye having the pyrene ring may be a water-soluble fluorescent dye such as Solvent Green 7 which may be used in the ink composition in the amount from 0.2 to 8 percent by weight (col. 3 line 56-col. 4 line 20). The reference further teaches that the pH value of the ink composition is in the range of 9 to 14 (col. 4 lines 45-50). The liquid medium of the ink composition is a mixture of water and a water-soluble organic solvent which includes ethylene glycol, diethylene glycol, glycerin (first organic compound of (i)), ethanol and isopropyl alcohol (monohydric alcohol) present in the amount of 10 to 40 percent by weight (col. 5 lines 10-34). A nonionic surfactant (second organic compound of (i)) may be present in the ink composition which includes surfactants such as ethylene oxide adducts of acetylene glycol (which is known to have the formula set forth in claim 24 and also known as Acetylenol EH in examples), present in the amount of 0.01 to 10 percent by weight (col. 5 lines 40-66). Other additives such as urea and urea derivative, viscosity modifier, preservative, antioxidant and fungicide may be present in the ink composition (col. 6 lines 9-14).

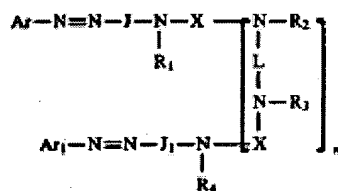
Bauer et al and Teraoka et al are combinable because they are from the same field of endeavor. Therefore it would have been obvious to one of ordinary skill in the art to use the components of Teraoka et al in the ink composition of Bauer et al because Bauer et al broadly discloses the specific component taught by Teraoka et al which are well known in the art.

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Claims 2-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bauer et al (US Patent 6,176,908 B1) as applied to claim 1 above, and further in view of Saito et al (5,728,201).

Bauer et al is described above but fails to teach the specific dye set forth in claims 2-5.

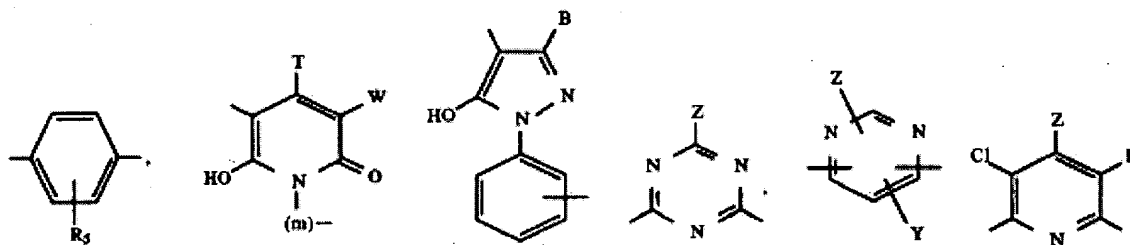
Saito et al (US Patent 5,728,201) teach an yellow ink composition comprising at least two yellow dyes and a liquid medium dissolving or dispersing the dyes therein, wherein the ink comprises a dye represented by the following general formula (1) in the state of a free acid, and a yellow dye having a SO₃H group as a main solubilizing group in the state of a free acid (abstract and col. 2 lines 14+). The reference further discloses that Ar and Ar₁ are independently an aryl group or a substituted group selected from the group consisting of COOH and COSH, J and J₁ are independently a group selected from the group consisting of groups represented by the general formulae



in which R₅ is a radical selected from the group consisting of H, alkyl groups, substituted alkyl groups, alkoxy groups, halogens, CN, a ureido group and NHCOR₆ (R₆ being a radical selected from the group consisting of H, alkyl groups, substituted alkyl groups, aryl groups, substituted aryl groups, aralkyl groups and substituted aralkyl groups), T is an alkyl group, W is a radical selected from the group consisting of H, CN, CONR₁₀R₁₁, pyridinium and COOH, (m) is an alkylene chain having 2 to 8 carbon atoms, and B is a

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radical selected from the group consisting of H, alkyl groups and COOH, R₁, R₂, R₃, R₄, R₁₀ and R₁₁ are independently a radical selected from the group consisting of H, alkyl groups and substituted alkyl groups, L is a divalent organic bonding group, n is 0 or 1, X is a carbonyl group or a group selected from the group consisting of groups represented by the general formulae



in which Z is a group selected from the group consisting of OR₇, SR₇, and NR₈SR₉, Y is a radical selected from the group consisting of H, Cl, CN and Z, E is a radical selected from the group consisting of Cl and CN, and R₇, R₈, and R₉ are independently a radical selected from the group consisting of H, alkenyl group, substituted alkenyl groups, alkyl groups, substituted alkyl groups, aryl groups, substituted aryl groups, aralkyl groups and substituted aralkyl groups, or R₈ and R₉ form a 5- or 6-membered ring together with the nitrogen atom to which they are bonded, with the proviso that (1) Ar and Ar₁ have at least two groups selected from COOH and COSH where they have no SO₃H group, or (2) Ar and Ar₁ have groups selected from COOH and COSH of at least the same number as the number of SO₃H groups where they have one or more SO₃H groups (col. 2 line 19-col. 3 line 62 and col. 5 line 50-col. 7 line 10). The reference discloses that

dyes having the structures as the above may be a direct dye such as direct yellow 86 (col. 13 lines 35-41).

Therefore it would have been obvious to one of ordinary skill in the art to use the direct dye of Saito et al in the ink composition of Bauer et al, because Bauer et al discloses that an additional yellow dye may be used which is broad enough to encompass the yellow dye taught by Saito et al.

Response to Arguments

Applicant's arguments filed February 4, 2004 have been fully considered but they are not persuasive.

Applicant argue that Bauer is not seen to use the range of content of colorants as in the present claims, specifically the content of Acid Red 52 and Direct Yellow is not seen to fall under the range of the present invention. The Examiner agrees that the Acid Red 52 is slightly outside of the claimed range, however a prima facie case of obviousness exists where the claimed ranges and prior art ranges do not overlap but are close enough that one skilled in the art would have expected them to have the same properties (*Titanium Metals Corp of America v. Banner*, 778 F.2d 775, 227 USPQ 773).

The applicant's argue that Teraoka is not seen anywhere to be concerned with mixing of dyes and that Saito is not seen anywhere to be concerned with the use of Acid Red 52. However, this is not deemed persuasive since the Examiner did not apply the secondary references to remedy what the Applicant considers a deficiency of the mixture of Acid Red 52 ranging from 0.1 to 0.4 percent by weight and at least one direct dye ranging from 0.11 to 0.4 percent by weight. The secondary reference of Teraoka

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was applied to show that glycerin, urea and its derivatives and a specific surfactant were obvious and well known in the art to be added to the ink composition and the secondary reference of Saito was applied to show that the specific structure of an azo dye (which is classified as a direct dye) that may be applied to the ink composition. Therefore the Examiner has maintained the 103(a) rejection of Bauer in view of Teraoka and Saito.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).


A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Veronica F. Faison whose telephone number is 571-272-1366. The examiner can normally be reached on Monday-Thursday and alternate Fridays 8 am to 5 pm.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

VFF



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